

Application No. 10/091,578
Amendment dated April 29, 2006
Reply to Office Action of December 29, 2005

Docket No.: 4035-0146P

AMENDMENTS TO THE DRAWINGS

The attached sheet(s) of drawings includes cancellation of Fig. 3 and relabeling Figs. 4 and 5 as Figs. 3 and 4.

Attachment: Replacement sheet
 Annotated sheet showing changes

REMARKS

Applicants thank the Examiner for the thorough consideration given the present application. Claims 2-9 are currently being prosecuted. The Examiner is respectfully requested to reconsider his rejections in view of the amendments and remarks as set forth below.

Rejection under 35 U.S.C. § 102

Claims 1 and 3 stand rejected under 35 U.S.C. § 102 as being anticipated by Krishnarajah et al. (U.S. Published Application 2002/0191556). This rejection is respectfully traversed.

By way of the present Amendment, Applicants have cancelled claim 1 and instead inserted claim 9 as the only independent claim. Although claim 9 is based on claim 1, it includes a number of other features not previously claimed.

The Examiner states that Krishnarajah discloses a network system that seamlessly integrates radio systems, including a basic access network that enables communication from the basic access component 33 provided in a mobile host and widely deployed basic access network (530) base stations, 28 and comprises a basic access network channel implemented with two-way radio interface and a basic access network protocol. Applicants disagree that claim 9 is anticipated by Krishnarajah.

Claim 9 has now been presented which indicates that the radio stations are heterogeneous and that the system comprises a basic access network having a common control/signaling channel to communicate with the participant networks, two or more wireless communication service systems and a common core network connected to the basic access network and the wireless communication service systems. The basic access network enables communication between the basic access component in a mobile host and establishes a basic access network channel together with a two-way radio interface. The basic access network protocol is used between the network and the common core network as an integrated protocol.

Thus, the basic access network of the present invention is to be laid over all the constituent networks of the integration. Using the common signaling packets of the basic access network, users can access any of the service systems and can smoothly move across the overlapped service systems. Thus, mobile terminal 10 makes wireless communication with both the BAN and the service networks while the BAN and the service networks communicate through the common core network. Thus, the invention converges wireless systems at various levels even though the systems have different operations, both technically and from a business point of view.

The basic access network has three main logical components, namely, the set of BAN components in the mobile terminals and deployed base stations, a BAN channel which is implemented together with a special two-way radio interface which is independent of a radio interface for accessing the service network, and the BAN protocol specially developed for the implementation of the interfaces between the BAN and the common core network.

As shown in Fig. 2, the mobile terminal contains a basic access component to communicate with the basic access network. A software defined radio 24 accommodates a number of subsystems in the terminal. All of the subsystems are equipped with necessary components to operate independently with the corresponding air interfaces. Thus, the present invention has a basic access network that enables communication between a basic access component and a mobile host as a network access means and basic access network base stations. The invention also establishes a basic access network channel implemented together with a two-way radio interface and a basic access network protocol used between the basic access network and the common core network as an integrated protocol. Thus, the basic access network improves the efficiency of handoffs between heterogeneous systems. Especially, the transmission of locational information facilitates the discovery of the optimum system as a handoff destination.

The Krishnarajah reference does not teach that the network system provides a common controlling/signaling channel to communicate participant networks in the network system. Thus,

in Figs. 2 and 5, which were cited by the Examiner, there is no description of a basic access network which provides a common control/signaling channel to communicate participant networks in the network system and a BAN channel which is implemented together with a special two-way radio interface and which is independent of a radio interface for accessing the service network.

Thus, this reference merely provides a method of sending from the radio network access to the mobile station a message that downloads the configurations for each of the plural header adaptation strategies for internet-transmissible packets and receiving at the radio access networks a message which informs a radio access network which of the plural strategies is elected by the mobile station. The present invention is not concerned with the same problems as does the reference. It is noted that the reference does not show the presently claimed invention, in particular, a common control/signaling channel and a common core network connected to both the basic access network and the wireless communication service systems. Further, the reference does not show the basic access network protocol used as an integrated protocol. For these reasons, Applicants submit that claim 9 is not anticipated by this reference. Furthermore, claims 2-8 depend from claim 9 and as such, are also considered to be allowable. In addition, each of these claims recite other features that make them additionally allowable.

Rejection under 35 U.S.C. § 103

Claims 2 and 4-8 stand rejected under 35 U.S.C. § 103 as being obvious over Krishnarajah et al. in view of Hogan et al. (U.S. Published Application 2003/0040314). This rejection is respectfully traversed.

The Examiner cites Hogan to show a user interface within a mobile host. Applicants submit that these claims are allowable based on their dependency from allowable claim 9. Furthermore, Applicants submit that even the combination of Krishnarajah and Hogan et al. do not teach the present claimed invention. Hogan only discloses that the radio access network transmits information associated with one of geographic coverage areas indicating whether the

one geographic coverage area requires an area update procedure. Thus, neither of the references teach that the network system provides a common control/signaling channel to communicate networks in the network system.

Conclusion

In view of the above remarks, it is believed that the claims clearly distinguish over the patents relied on by the Examiner, either alone or in combination. In view of this, reconsideration of the rejections and allowance of all the claims are respectfully requested.

Dated: May 1, 2006

Respectfully submitted,

By 

Joe McKinney Mundy

Registration No.: 32,334

BIRCH, STEWART, KOLASCH & BIRCH, LLP

8110 Gatehouse Road

Suite 100 East

P.O. Box 747

Falls Church, Virginia 22040-0747

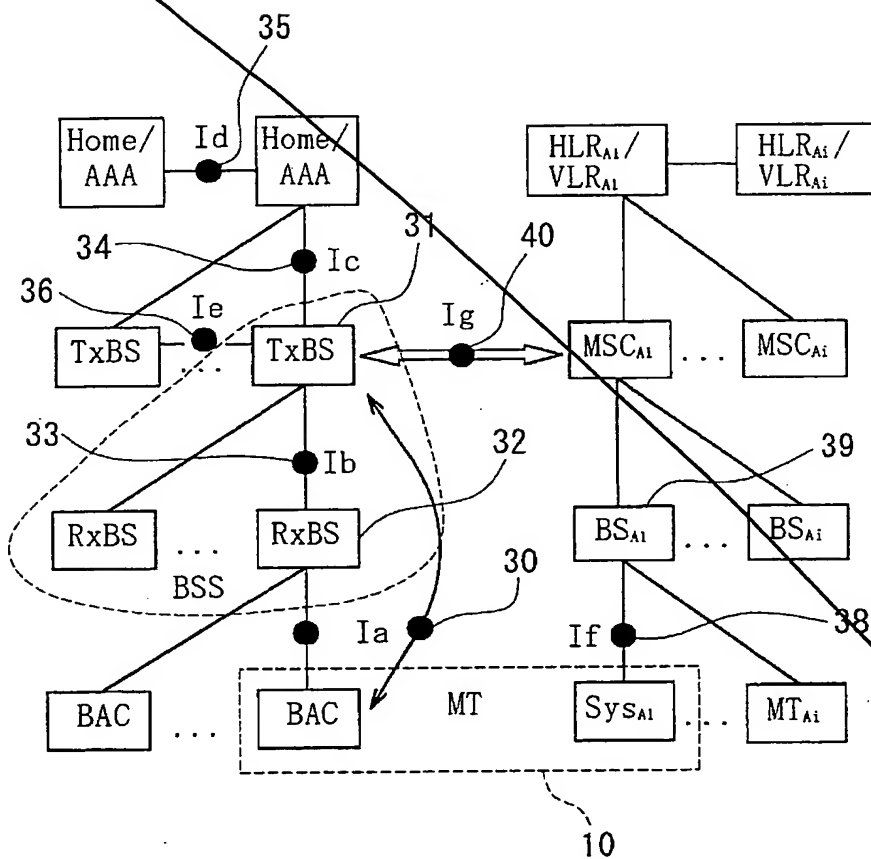
(703) 205-8000

Attorney for Applicant

Attachments

CANCELLED

Fig. 3



ANNOTATED SHEET

Fig. ~~4~~ 3

	Band 1		Band 2	
	down	up	down	up
Freq. Band (f_c), MHz	280	280	850	850
Trans. Rate(R), kbps	4.8	1.2	4.8	1.2
Tx Power (P_{Tx}), watt	40	0.1	40	0.1
Tx ant. Gain (G_T), dBi	7	-5	7	-5
Tx ant.height(h_t/h_m) m	30	1	30	1
Prop. dist.(r), km	9.85	2.03	4.08	0.86
RxBS/TxBS raito	23		23	
Prop. Loss (L_P), dBm	148.5	124.8	148.6	124.7
Rx ant. Gain (G_R), dBi	-5	2	-5	2
Rx ant.height(h_m/h_b) m	1	30	1	30
Rx power (P_{Rx}), dBm	-100.5	-107.8	-100.6	107.7
Receiver NF, dB	5	4	5	4
Noise Eq. temp. $^{\circ}\text{K}$	777	588	777	588
Noise PSD (N_0), dBm/Hz	-169.7	-170.9	-169.7	-170.9
Receive C/N_0 , dB	69.2	63.1	69.1	69.2
Receive E_b/N_0 (γ), dB	32.4	32.3	32.3	32.4
Reqd E_b/N_0 (γ_{req}), dB	12.3	12.3	12.3	12.3
SNR margin, dB \approx	20	20	20	20

ANNOTATED SHEET

Fig. ~~3~~ 4

Locality	Band 1		Band 2	
	down	up	down	up
Urban, small-medium	9.48	2	4.08	0.86
Urban, large	9.85	2.03	4.08	0.86
Suburban	14.44	3.05	6.33	1.33